



Application No.: 10/711,248

TFW
10/24

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

PENG LEE and KEVIN SEDDON

Serial No.: 10/711,248

Filed: September 3, 2004

For: METHOD TO DETECT TERMITE
INFESTATION IN A STRUCTURE

Attorney Docket No.: 026018.50278

TRANSMITTAL LETTER

Mail Stop: DD
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The following documents for the above-captioned application are enclosed herewith:

1. Supplemental Information Disclosure Statement;
2. Information Disclosure Citation (form PTO-A820);
3. Check No. 176010 in the amount of \$180.00; and
4. Return Postcard.

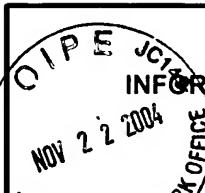
If an additional fee is due, please debit Deposit Account No. 50-0858. In this regard, a duplicate copy of this Transmittal Letter is enclosed herewith. If you have any questions, please contact me.

Respectfully Submitted,

Butler, Snow, O'Mara, Stevens &
Cannada, PLLC

11-18-04
Date

By: Susan B. Fentress
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Reg. No. 31,327
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Memphis, TN 38119
(901) 680-7319

	ATTY DOCKET NO. 026018.50278	APPLICATION NO. 10/711.248
	APPLICANT(S) Peng Lee and Kevin Seddon	
	FILING DATE September 3, 2004	GROUP ART UNIT Unknown

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	DD	6,751,342	06/15/04	Steven Shepard	382/141	250/332	04/15/02
	EE	6,714,017	03/30/04	Enachescu et al.	324/501	324/770	11/30/00
	FF	6,516,084	02/04/03	Steven Shepard	382/141	250/332	12/04/00
	GG	6,192,325	02/20/01	Piety et al.	702/184	702/183	09/15/98
	HH	6,150,944	11/21/00	Martin et al.	340/632	43/124	07/15/99

U.S. PATENT APPLICATION PUBLICATIONS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	20040162710	08/19/04	Schwartz	703/2		02/17/04
	BB	20030230717	12/18/03	Reilly et al.	250/341.6		04/10/03
	CC	20010001851	05/24/01	Piety et al.	702/184	702/181	01/02/01

FOREIGN PATENT DOCUMENTS

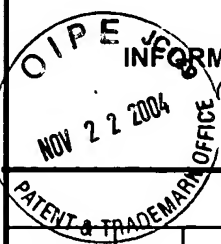
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	AF	H07-143837	06/06/95	Japan	A01M		✓	
	AG	H07-255344	09/10/95	Japan	A01M		✓	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

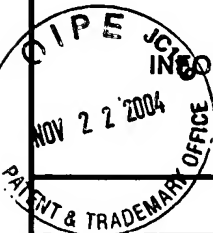
	AH	Thermal Inspection services (http://www.thermalinspections.com) "Residential Inspections" New Home Inspections"
	AI	"Infrared Building Science" Infrared Training Center

EXAMINER	DATE CONSIDERED
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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				Peng Lee and Kevin Seddon				
				FILING September 3, 2004		GROUP ART Unknown		
U.S. PATENT DOCUMENTS								
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
II		6,081,481	06/27/00	Sabatier et al.	367/8	73/604	04/17/87	
JJ		6,052,066	04/18/00	Nao-Yao Su	340/870.1	340/573	10/31/96	
KK		6,028,625	02/22/00	Michael Cannon	348/135	348/164	12/12/97	
LL		5,877,422	03/02/99	Hirofaka Otomo	73/587	43/124	06/28/96	
MM		5,834,661	11/10/98	Nonaka et al.	073/866	374/5	11/12/96	
U.S. PATENT APPLICATION PUBLICATIONS								
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
FOREIGN PATENT DOCUMENTS								
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)								
		AJ	"SBA Thermographics" Infrared Thermography July 21, 2001					
		AK	Infrared Thermography http://www.maverickinspection.com/inelectapp.html Maverick					
EXAMINER				DATE CONSIDERED				

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 PIPE JOINT INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)	ATTY DOCKET NO. 026018.50278	APPLICATION NO. 10/711,248
	Peng Lee and Kevin Seddon	
	FILING September 3, 2004	GROUP ART Unknown

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
NN		5,815,090	09/29/98	Non-Yao Su	340/870.16	43/124	10/31/96
OO		5,742,335	04/21/98	Cannon	348/135	348/82	07/19/95
PP		5,719,395	02/17/98	Lesniak	250/330	250/341.6	09/12/96
QQ		5,637,871	06/10/97	Pietz, et al.	250/330	250/358.1	06/07/95
RR		5,631,465	05/20/97	Shepard	250/330	250/358.1	02/29/96

U.S. PATENT APPLICATION PUBLICATIONS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

		AL	Infrared Thermography http://www.maverickinspections.com

EXAMINER	DATE CONSIDERED
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INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>	ATTY DOCKET NO. 026018.50278	APPLICATION NO. 10/711,248
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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	SS	5,592,774	01/14/97	Galyon	43/124	43/131	02/10/94
	TT	5,571,967	11/05/96	Tanaka et al.	73/587	73/81	07/06/94
	UU	5,444,241	08/22/95	Del Grande et al.	250/253	250/339.06	10/01/93
	VV	5,285,688	02/15/94	Robbins et al.	73/587		09/17/92
	WW	4,941,356	07/17/90	Pallaske	73/587		10/28/88

U.S. PATENT APPLICATION PUBLICATIONS

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	XX	4,809,554					
	YY	4,768,158	08/30/88	Takahito Osanai	364/507	364/557	01/23/87
	ZZ	4,647,220	03/03/87	Adams et al.	374/5	374/57	07/09/84
	AB	4,550,376	10/29/85	Robert Maciejczak	364/512	358/100	02/14/83
	AC	3,791,097	02/12/74	Cassella et al.	52/741	52/514	01/19/73

U.S. PATENT APPLICATION PUBLICATIONS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AD	10/680,377		Lee et al.			10/07/03
	AE	10/708,571		Lee et al.			03/11/04

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

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PENG LEE and KEVIN SEDDON)
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For: METHOD TO DETECT TERMITE) Attorney Docket No.: 026018.50278
INFESTATION IN A STRUCTURE)

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Mail Stop: DD
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached Form PTO-A820.

Applicants respectfully requests that the Examiner consider the listed documents and indicate that it was considered by making appropriate notations on the attached form.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that the listed documents are material or constitute "prior art". If the Examiner applies the document as prior art against any claim in the application and Applicants determines that the cited documents do not constitute "prior art" under United States law. Applicants reserve the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicants further reserves the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should the documents be applied against the claims of the present application.

11/22/2004 RECEIVED 00000071 10711248

11/22/2004

100.00 EP

Document AA – US Patent Application No.: 2004/0162710 by Schwartz was filed on February 17, 2004 (based on provisional application no.: 60/447,584 filed on February 14, 2003). This application discloses a system and method for assessing mold growth. A physical analysis is combined with a thermographic analysis to quantify the propensity for mold growth.

Document BB – US Patent Application No.: 2003/0230717 by Reilly, et al. discloses an apparatus for testing water-wall tubes in boilers.

Document CC – US Patent Application No.: 2001/0001851 by Piety, et al. was published on May 24, 2001 and discloses a database wizard. The maintenance database may include thermography data (FIGS. 23 and 24). This application relates to industrial components.

Document DD – US Patent No.: 6,751,342 (June 15, 2004) by Shepard discloses a system for generating thermographic images using thermographic reconstruction.

Document EE – US Patent No.: 6,714,017 (March 30, 2004) by Enachescu, et al. discloses a method and system for infrared detection of electrical short defects in a thin ray cathode tube. In this method, the electrical system is electrically stimulated prior to infrared mapping.

Document FF – US Patent No.: 6,516,084 by Shepard discloses temporary noise reduction, compression and analysis of thermographic image data.

Document GG – US Patent No.: 6,192,325 by Piety, et al. discloses that the video data collector can interface with a base static computer.

Document HH – US Patent No.: 6,150,944 discloses a system comprising a sensor and associated microprocessor to detect the presence of gases emitted by termites. The processor relays a signal to an appropriate output device to alert a user that the system has detected the presence of termites.

Document II – US Patent No.: 6,081,481 discloses a method for detecting the seismic discontinuity in acoustic impedance caused by an acoustically hard, reflective object buried a few feet below poroelastic soil using seismic activity induced through acoustic coupling with a

remote sound source. The abrupt change in the soil impedance caused by the buried object causes sound to reflect between the object and the surface and increase the amplitude of the seismic vibrations induced by the incident acoustic energy. The change in the seismic displacement of the soil is on the order of angstroms which can be detected using remote optical test equipment such as a laser-doppler vibrometer (LDV) commonly used in nondestructive testing. A sound source emits sound at frequencies that induce significant seismic coupling with the poroelastic soil. Part of a beam of laser light of an LDV is scanned over the ground. The laser light is shifted in frequency from its source frequency by an amount intended to approximate the frequency of the anticipated seismic vibrations. The seismic vibrations of the soil frequency modulate the laser light to form upper and lower side bands. The amplitude of the side bands increases in the presence of an acoustically hard object due to the greater seismic vibrations over the acoustically reflecting surface. Laser light that is scattered back is combined with unshifted laser light in the photodetector of the LDV so as to eliminate the optical frequency effects of the laser and to cause the carrier frequency and side bands to emerge as distinct signals.

Document JJ – US Patent No.: 6,052,066 discloses materials and methods useful for monitoring and management of certain pests well as others biotic and abiotic factors. The invention is particularly well suited for the control of social insect pests, and particularly, termites. The invention concerns methods and apparatuses for monitoring pest activity and presenting a toxicant. The invention is useful as part of an Integrated Pest Management Program and can significantly enhance the efficacy, efficiency and convenience of the management program.

Document KK – US Patent No.: 6,028,625 (February 22, 2000) by Cannon discloses an examination system for architectural structures. See column 2, ll. 46-65.

Document LL – US Patent No.: 5,877,422 discloses In order to provide a termite detection apparatus that is capable of detecting an infestation of termites in a reliable manner and a termite alarm unit that employs this termite detection apparatus, the termite detection apparatus according to the present invention comprises a sensor section. The sensor section comprises a case, an attractant member provided inside the case and a detection portion provided with a for

detection mechanism where the attractant member is provided to detect termites that have entered, attracted by the attractant member. The termite detection apparatus also includes a sensor cover enclosing an area around the sensor section. In addition, the termite alarm unit gathers termite detection signals sent from a plurality of such termite detection apparatuses at a relay device, sends the termite detection signals gathered at the relay device to an alarm section as a termite presence signal so that a warning can be issued to the resident with a voice produced at an audio alarm section and with a visual indication made at a visual alarm section.

Document MM – US Patent No.: 5,834,661 by Nonaka, et al. discloses methods of detecting defects in materials using infrared thermography.

Document NN – US Patent No.: 5,815,090 discloses materials and methods useful for monitoring and management of certain pests well as other biotic and abiotic factors. The invention is particularly well suited for the control of social insect pests, and particularly, termites. The invention concerns methods and apparatuses for monitoring pest activity and presenting a toxicant. The invention is useful as part of an Integrated Pest Management Program and can significantly enhance the efficacy, efficiency and convenience of the management program.

Document OO – US Patent No.: 5,742,335 by Cannon discloses an examination system for architectural structures.

Document PP – US Patent No.: 5,719,395 (February 17, 1998) by Lesniak discloses coating tolerant thermography.

Document QQ – US Patent No.: 5,637,871 by Piety, et al. discloses a portable digital infrared thermography system. The thermal imaging camera is coupled to a video camera. Various carrying devices for hands-free operation such as, a vest (FIG. 1) and hand-truck (FIG. 3), are disclosed. A video data collector can be used to interface with a base station computer.

Document RR – US Patent No.: 5,631,465 (May 20, 1997) by Shepard discloses method of interpreting thermographic data for non-destructive evaluation. An object is heated and infrared pictures are taken of the object as it cools to identify subsurface irregularities.

Document SS – US Patent No.: 5,592,774 discloses the present invention relates to a method and system for use in determining the presence of termites and controlling termite population. The system and method utilized changes in, for example, conductivity, as a method of determining termite activity.

Document TT – U.S. Patent No. 5,571,967 discloses the termite detecting device is placed in an expected invading passage for detecting damage or destruction caused by termites. One configuration of the device includes: a detecting wood sample for attracting termites; a detecting terminal being pressed against the detecting wood sample while the detecting wood sample is supplied with water as required; and a magnetic circuit capable of being opened and closed by the movement of the detecting terminal. When the detecting wood sample is eaten and damaged by termites and becomes fragile, the detecting terminal sinks into the detecting wood sample by virtue of a pressing force and the magnetic circuit is made open. As a result, the device detects the existence of termites. Alternatively, another configuration of the termite detecting device detects vibrations caused by termites so as to detect the invasion of termites. In either device, when a valid signal from a magnetic sensor or a vibration sensor is issued, an indicator disposed in a house is activated to warn in response to the sensor signal. Alternatively the valid signal is transmitted by way of telephone line, etc., to a control center. Thus, the device warns the user of the invasion by termites in an early stage so that the user may take a quick action.

Document UU – US Patent No.: 5,444,241 (August 22, 1995) by Del Grande, et al. discloses emissivity corrected infrared method for imaging structural heat flow.

Document VV – U.S. Patent No. 5,285,688 discloses a system for detecting wood-destroying insects by sensing acoustic emissions generated by the insects as they feed. The system comprises two acoustic emission sensors, an amplification section, a signal processing section and an indicator section. The system comes into mechanical contact with the wood to be inspected through the use of a bolt which is inserted into the wood and attaches to an acoustic emission sensor or through the use of an adhesive layer which directly attaches an acoustic emission sensor to the wood. The acoustic emission sensors are electrically connected to the amplification section which is electrically connected to the signal processing section. The signal

processing section is capable of distinguishing between insect-caused acoustic emissions and noise-caused acoustic emissions detected by the acoustic emission sensors. The results of the signal processing section are sent to the indicator section.

Document WW – U.S. Patent No. 4,941,356 discloses the process of detecting the presence of insects or insect larvae in a solid substrate, e.g. wood, in which the behavioral patterns of the insects to be detected are established. These behavioral patterns are compared to actual noise and vibration patterns detected in the substrate, after extraneous noise is filtered from the actually detected information and the data has been converted to analog form. The actual analysis is performed by a microcomputer. The microcomputer analysis yields an output indicative of damage or movement activity or lack of such activity.

Document XX – U.S. Patent No. 4,809,554 discloses an apparatus and method for detecting insects detects insects by detecting ultrasonic signals which are generated by mechanical disturbances in material on which insects are feeding caused by the insects feeding on the material.

Document YY – US Patent No.: 4,768,158 (August 30, 1988) by Osanai discloses an apparatus and method to detect smokestack deterioration.

Document ZZ – US Patent No.: 4,647,220 (March 3, 1987) by Adams, et al. discloses a method and apparatus for non-destructive identification of subcoating corrosion.

Document AB – US Patent No.: 4,550,376 (October 29, 1985) by Maciejczak discloses an inspection system for mechanical structures. More specifically, this invention provides an unmanned platform to carry instruments for an inspection of mechanical structure.

Document AC – US Patent No.: 3,791,097 (February 12, 1974) to Cassella, et al. discloses a method of detecting and repairing a structural roof damaged by subsurface moisture using an infrared scan from a range of about 300 feet to 1500 feet using a helicopter or an airplane.

Document AD – U.S. Patent Application No.: 10/680,377 discloses a method and system for detecting the presence of subterranean termites, involving use of a thermal imaging camera to

scan the structure before installation of an acoustic sensor in order to quickly locate potential areas of subterranean termite infestation, and an acoustic sensor in the form of an accelerometer or the disclosed innovative acoustic sensors having a bandwidth of at least 100 Hz to 15 kHz to detect noises made by the subterranean termites. Information collected by the acoustic sensor may be transmitted to a portable mini-computer (pocket PC) for confirmation and to a central operations center for inclusion in a comprehensive database of termite data and information. A method and system for detecting the presence of dry-wood termites concealed in a structure, involving use of a heat source to warm up the wooden structure of interest and then using a thermal imaging camera to scan the structure for suspicious dry-wood infestation, followed by the use of an acoustic sensor and pattern recognition software to more precisely and accurately locate potential area of dry-wood termite infestation. Additionally, structural damage can be evaluated by the methods discussed herein, including live trees. Additionally, the method can be used to manipulate termite infestation behavior.

Document AE – U.S. Patent Application No.: 10/708,571 discloses an apparatus for nondestructive residential inspection and various methods for using a thermal imaging apparatus coupled to a digital recording means to inspect exterior residential components, interior residential components, and the electrical system.

Document AF – Japanese Patent No. H07-143837 discloses Japanese Patent No. H07-255344 discloses a device to surely eliminate the maloperation due to a small animal which is other than termites and does not eat a substance for sensing so as to sense the vibration produced when the termites are eating the substance such as wood for sensing that is a favorite bait substance. This sensor for termites is obtained by equipping a sensor body 1 with a setting means for setting a substance such as wood 6 willingly eaten by the termites near an intruding passage of the termites and a sensing means for sensing the vibration produced by eating of the substance with the termites using a vibration sensor 5.

Document AG – Japanese Patent No. H07-143837 discloses a system to provide the subject system consisting of such a specific scheme as to transducer the living sound of termite into electric signals, thus capable of easily catching termite living status and also of realizing early detection of the damages due to termite by its installation in buildings. Firstly, the living

sound of termite is transduced by two acoustic sensors 1, 1 into electric signals which are then inputted into an operational processor 3 where an operational processing is made to determine the difference between the two signals. Second, the signals subjected to operational processing are inputted into a comparator 5. Among these signals, those exceeding a specified threshold value are outputted as termite detection signals. Furthermore, these signals are sent, e.g. via a level transducer 6 and an event counter 7, to a display assessment section 8 where an assessment processing is conducted by a microprocessor 12, and the assessment of termite living status is ensured to inform through an event buzzer 13, a display device 15, etc.

Document AH – Thermal inspection services (<http://www.thermalinspections.com>) offers residential and new home inspections using infrared imaging. The specific methods used are not disclosed.

Document AI – Infrared Building Science is a brochure on thermographic inspection techniques. The specific methods are not disclosed.

Document AJ – SBA Thermographics is a brochure offering thermal imaging services for a variety of end uses. The specific methods are not disclosed.

Document AK – Infrared Thermography (<http://www.maverickinspection.com/inelectapp.html>) discloses indoor applications for infrared scans. These are industrial applications with various loads.

Document AL – Infrared Thermography (<http://www.maverickinspections.com>) discloses using infrared technology for building applications.

In the event the Examiner has any questions regarding this document, please contact the undersigned at the telephone number listed below.

Respectfully Submitted,

Butler, Snow, O'Mara, Stevens &
Cannada, PLLC

11-18-04
Date

By: Susan B. Fentress
SUSAN B. FENTRESS
Reg. No. 31,327
6075 Poplar Avenue, Suite 500
Memphis, TN 38119
(901) 680-7319

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, on 11-18-04 in an envelope addressed to: Mail Stop: DD, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Lori L. Wood
LORI L. WOOD